

10/606,201 filed 6/25/2003

Burd-Mehta, et al.

Reply to Office Action of September 20, 2005

REMARKS/ARGUMENTS

Claims 1–20 are pending in the above-captioned application. Of these claims, claims 1–3, 7–11, and 17–20 stand rejected, and claims 4–6 and 12–16 are withdrawn from consideration. With this paper, claims 1, 2, and 12 have been amended. No new matter was added with the amendment.

I. Election/Restrictions

Applicants confirm that they have elected to prosecute Group I claims 1–3, 7–11, and 17–20. The election was made without traverse.

II. Claim rejections under 35 U.S.C. § 102(e) as allegedly anticipated by Nelson et al. (US 6,007,690)

Claims 1, 2, 8–11, and 17–19 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Nelson et al. (US 6,007,690). This rejection is respectfully traversed. “[F]or anticipation under 35 U.S.C. § 102, a single reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present.” MPEP § 706.02. “The identical invention must be shown in as complete detail as is contained in the . . . claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, USPQ2d 1913, 1920 (Fed. Cir. 1989).

With regard to independent claims 1 and 17, at a minimum, Nelson et al. do not teach a set of particles comprising flowable particles. The particles taught by Nelson et al., specifically the beads taught in col. 5, lines 12–49, and in col. 6, lines 14–29, are not flowable, instead being maintained in the enrichment channel by retention means. “[G]lass frits or plugs of agarose gel may be employed to cover the fluid outlets or inlets of the chamber, where the frits or plugs allow for fluid flow but not for particle or other insoluble matrix flow out of the enrichment channel.” Col. 6, lines 2–6. In addition, the enrichment means within the enrichment channel is described as “a bed of polymeric beads or paramagnet beads,” the term “bed” indicating that the beads are static. Col. 6, lines 14 and 15, emphasis added. Nowhere do Nelson et al. teach that the beads are flowed into the enrichment channel and then become static. The enrichment channel inlet is described in col. 8, lines 8–45, as admitting sample, elution buffer, elution solvent, and

10/606,201 filed 6/25/2003
Burd-Mehta, et al.
Reply to Office Action of September 20, 2005

wash solvent. The inlet is not described as admitting beads. Nelson et al. are entirely silent with regard to how the beads become positioned within the enrichment channel.

Thus, Nelson et al. do not teach every aspect of the claimed invention either explicitly or impliedly, nor do they show the identical invention claimed by Applicants in as complete detail as is contained in independent claims 1 and 17. Withdrawal of the rejection of these claims under U.S.C. § 102(e) as being anticipated by Nelson et al. is, therefore, respectfully requested.

Claims 2 and 8-11 depend directly or indirectly from independent claim 1, while claims 18 and 19 depend directly from independent claim 17. Therefore, Applicants respectfully submit that these dependent claims are allowable for at least the same reasons as set forth herein with respect to amended independent claim 1. Withdrawal of the rejection of dependent claims 2, 8-11, 18, and 19 under U.S.C. § 102(e) as being anticipated by Nelson et al. is also respectfully requested,

III. Claim rejections under 35 U.S.C. § 102(e) as allegedly anticipated by Parce et al. (US 5,942,443)

Claims 1-3, 7, 9-11, and 17-20 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Parce et al. (US 5,942,443). This rejection is respectfully traversed.

With regard to independent claims 1 and 17, at a minimum, Parce et al. do not teach a microchannel comprising a particle capture region and a reagent flow region, the particle capture region having an increased depth relative to the reagent flow region. As noted by the Examiner on page 6 of the Office action, Parce et al. show bead resting wells 326-338 that "are larger than" parallel reaction channels 312-324. In independent claims 1 and 17, Applicants, by contrast, claim a particle capture region that has an "increased depth" relative to a reagent flow region. This is not the same as claiming a particle capture region that is "larger" than the reagent flow region. While Parce et al. do show different dimensions for the bead resting wells in relation to the parallel reaction channels, the dimensions shown are width rather than depth. Thus, Parce et al. teach a particle capture region that has an increased **width** relative to a reagent flow region rather than an increased **depth**.

10/606,201 filed 6/25/2003

Burd-Mehta, et al.

Reply to Office Action of September 20, 2005

As demonstrated above, Parce et al. do not teach every aspect of the claimed invention either explicitly or impliedly, nor do they show the identical invention claimed by Applicants in as complete detail as is contained in independent claims 1 and 17. Withdrawal of the rejection of these claims under U.S.C. § 102(e) as being anticipated by Parce et al. (US 5,942,443) is, therefore, respectfully requested.

Claims 2, 3, 7, and 9-11 depend directly or indirectly from independent claim 1, while claims 18-20 depend directly from independent claim 17. Therefore, Applicants respectfully submit that these dependent claims are allowable for at least the same reasons as set forth herein with respect to amended independent claim 1. Withdrawal of the rejection of dependent claims 2, 3, 7, 9-11, and 18-20 under U.S.C. § 102(e) as being anticipated by Parce et al. (US 5,942,443) is also respectfully requested.

IV. Claim rejections under 35 U.S.C. § 102(e) as allegedly anticipated by Parce et al. (US 6,429,025)

Claims 1-3, 7, 9-11, and 17-20 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Parce et al. (US 6,429,025). This rejection is respectfully traversed.

The arguments presented above with regard to Parce et al. (US 5,942,443) are equally appropriate with regard to Parce et al. (US 6,429,025). Neither reference shows or describes a microchannel such as is recited in Applicants' independent claims 1 and 17 comprising a particle capture region and a reagent flow region, the particle capture region having an increased depth relative to the reagent flow region. In the '025 reference, as in the '443 reference, Parce et al. teach a particle capture region that has an increased **width** relative to a reagent flow region rather than an increased **depth**. Therefore, Parce et al. do not teach every aspect of the claimed invention either explicitly or impliedly, nor do they show the identical invention claimed by Applicants in as complete detail as is contained in independent claims 1 and 17. Withdrawal of the rejection of these claims under U.S.C. § 102(e) as being anticipated by Parce et al. (US 6,429,025) is, therefore, respectfully requested.

Claims 2, 3, 7, and 9-11 depend directly or indirectly from independent claim 1, while claims 18-20 depend directly from independent claim 17. Therefore, Applicants

10/606,201 filed 6/25/2003
Burd-Mehta, et al.
Reply to Office Action of September 20, 2005

respectfully submit that these dependent claims are allowable for at least the same reasons as set forth herein with respect to amended independent claim 1. Withdrawal of the rejection of dependent claims 2, 3, 7, 9-11, and 18-20 under U.S.C. § 102(e) as being anticipated by Parce et al. (US 6,429,025) is also respectfully requested.

V. Claim rejections under the judicially created doctrine of obviousness-type double patenting

Claims 1-3, 7-11, and 17-20 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 14, 19, 22, 32, 34, 36, 64, and 67 of U.S. Patent No. 6,632,655 B2. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) accompanies this Office action response. As indicated in the disclaimer, U.S. Patent No. 6,750,661 B2 is commonly owned with this application.

VI. Claim amendments

As noted previously, claims 1, 2, and 12 have been amended. Claim 1 has been amended to correct "sets" to "set" to be consistent with "a set of particles" as recited in the claim. Claim 2 has been amended to correct the spelling of "microfluidic." Claim 12, which is currently withdrawn, has been amended to correct the same misspelling in anticipation of the method of use claims being rejoined with the product claims that have been demonstrated above to be in condition for allowance.

10/606,201 filed 6/25/2003

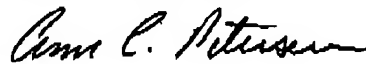
Burd-Mehta, et al.

Reply to Office Action of September 20, 2005

Conclusion

For the foregoing reasons, Applicants believe all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned attorney.

Respectfully submitted,



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Signed;

